Dr. Erick Moreno-Centeno

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Date: Friday, Sep., 17, 2021

Time: 1 - 1:50 pm

Zoom Meeting ID: 970 7656 5407

Password: 477211

Exactly solving linear programs:
From an undergraduate idea to a fruitful research topic

Abstract: Solving sparse linear systems has a central role in solving linear programs and other optimization problems. Exactly solving linear programs and systems is necessary for some applications (e.g., theoretical results, feasibility problems, military applications, applications with hefty costs, ill-conditioned problems, etc.). To address this, we are developing the Sparse Exact (SPEX) Factorization Framework: a high-performance, well-documented, and extremely robust suite of algorithms and software. This talk will focus on the untold story behind this research and its theoretical foundations and briefly discuss recent developments and computational results.

Biography: Dr. Erick Moreno-Centeno is the Associate Professor and Donna and Jim Furber '64 Faculty Fellow at the Wm Michael Barnes '64 Department of Industrial and Systems Engineering and the Eppright University Professor in Undergraduate Teaching Excellence at Texas A&M University. He earned his M.S. and Ph.D. degrees in Industrial Engineering & Operations Research and his M.S. degree in Computer Science, all from the University of California at Berkeley. He received his B.S. in Industrial Physics Engineering from ITESM Campus Monterrey, Mexico. Dr. Moreno's research focuses on optimization methods free of round-off errors and the design and analysis of new combinatorial optimization algorithms. He was honored with the Dr. Hamed K. Eldin Outstanding Early Career Industrial Engineer in Academia Award (2016) and the INFORMS Computing Society Prize (2021). He currently serves as Associate Editor for the journals *Networks*, *IISE Transactions*, and *Energy Systems*. Dr. Moreno teaches optimization courses, and his passion for teaching has been honored with numerous awards, most notably the Institute of Industrial Engineers' Operations Research Division Teaching Award.